Standard 7-7 The student will demonstrate an understanding of the significant political, economic, geographic, scientific, technological, and cultural changes and advancements that took place throughout the world from the beginning of the twentieth century to the present day.

7-7.7 Summarize the dangers to the natural environment that are posed by population growth, urbanization, and industrialization. (G, E, P, H)

Taxonomy Level: B 2 Understand/Conceptual Knowledge

Previous/future knowledge:
In 2nd grade, students identified the relationships between trade and resources both within and among communities, including natural, human, and capital resources (2-5.4).

In 3rd grade, students explained the impact and the causes of emigration from South Carolina and internal migration from the rural areas to the cities, including unemployment, poor sanitation and transportation services, and the lack of electricity and other modern conveniences in rural locations (3-5.4).

In 5th grade, students explained how humans changed the physical environment of regions and the consequences of such changes, including the use of natural resources and the expansion of transportation systems (5-6.2).

In 8th grade, student will explain how the increased industrialization and mechanization, the reduction in cotton production, and the emigration of African Americans both resulted from and contributed to agricultural decline in South Carolina (8-7.3). Students will also explain the economic impact of twentieth century events on South Carolina, including the opening and closing of military bases, the development of industries, the influx of new citizens, and the expansion of port facilities (8-7.5).

In Global Studies, students will summarize the impact of economic and political interdependence on the world, including efforts to control population growth, economic imbalance and social inequality (GS-6.4).

In US History, students will explain the lasting impact of the scientific and technological developments in America after World War II, including new systems for scientific research, medical advances, improvements in agricultural technology, and resultant changes in the standard of living and demographic patterns (USHC-8.5).

It is essential for students to know:
Students should know how the environment has been harmed by population growth, urbanization, and industrialization (also discussed in 7-7.3). Population growth and urbanization have led to an increase in land development, which has harmed or eliminated many animal and plant habitats. Some farming techniques also contribute to soil erosion. Hydrocarbon emissions from automobiles and carbon dioxide emissions

from the burning of fossil fuels such as coal and oil for energy have caused air and water pollution, acid rain, damage to the ozone layer, and increased the greenhouse effect.

It is not essential for students to know

For this indicator students do not need to know what scientists are doing to help protect the environment. It is not required for the students to know how countries have met to discuss ways to reduce the amount of pollutants emitted into the environment. However, a discussion of what has been done or could be done would be helpful.

Assessment guidelines:

The objective of this indicator is to **summarize** dangers to the natural environment; therefore, assessments should require students to **explain** how population growth, urbanization and industrialization have negatively impacted the environment. The Students should be able to use graphs, maps, or charts that show the effects of environmental damage as well as **explain** their causes and **recall** the basic process through which the change occurs.